

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

ILLINOIS POWER COMPANY)	
)	04-0476
Proposed General Increase)	
in Natural Gas Rates)	

DIRECT TESTIMONY
OF
LEE SMITH
LA CAPRA ASSOCIATES

ON BEHALF OF
BUSINESS ENERGY ALLIANCE AND RESOURCES

November 5, 2004

BEAR Exhibit 1

1 **I. INTRODUCTION.**

2

3 **Q. What is your name and business address?**

4 A. My name is Lee Smith, and I work for La Capra Associates, 20 Winthrop Square,
5 Boston, Massachusetts.

6

7 **Q. On whose behalf are you testifying in this proceeding?**

8 A. I am testifying on behalf of the Business Energy Alliance and Resources,
9 ("BEAR"), who represents customers whose business is grain drying, and who
10 currently are served under SC 67.

11

12 **Q. Please describe your background and experience.**

13 A. I am a Managing Consultant and Senior Economist at La Capra Associates. I
14 have been with this energy planning and regulatory economics firm for 21 years.
15 I have prepared testimony on rates and cost allocation regarding more than 20
16 utilities in 18 states and before the Federal Energy Regulatory Commission. Prior
17 to my employment at La Capra Associates, I was Director of Rates and Research,
18 in charge of gas, electric, and water rates, at the Massachusetts Department of
19 Public Utilities. Prior to that period, I taught economics at the college level. My
20 resume is attached as Exhibit LS-1.

21

22 **Q. Please describe your educational background.**

23 A. I have a bachelor's degree with honors in International Relations and Economics
24 from Brown University. I have completed all requirements for the Ph.D. except
25 the dissertation from Tufts University.

26

27 **Q. What is the subject of this proceeding that is of particular interest to BEAR?**

28 A. Illinois Power has filed for increases in and changes in its rates for delivery of
29 gas. Its revised rates are supposed to be based on the results of an allocated cost
30 of service study filed in this proceeding. The Company currently offers service to
31 grain dryers under SC 67, and to asphalt plants under SC 68. In this proceeding

the Company proposes to replace SC 67 and SC 68 with a new SC 66, which is described as a “seasonal use” rate. (Jones supplemental p.11.)

Q. Please summarize your testimony.

A. I am testifying regarding proposed SC 66, which appears to penalize these customers rather than rewarding them for using gas during the non-peak season. I discuss the unreasonable bill impacts that result from the Company’s proposal, which violate the principle of rate continuity. In addition, I have reviewed the Company’s cost allocations and rate design and found a number of problems. The Company has overallocated costs to the customers in the proposed SC 66, and thus the new rate is not cost based. In designing SC 66, the Company’s proposed customer charges are not appropriately based and are a major cause of the major bill impacts that will result from the proposed rate. Finally, the provision that will penalize these customers for using gas when the temperature is below 32 degrees is not justified and should be rejected.

Q. Please describe the bill impacts that result from the Company’s proposal for SC 66.

A. The Company’s proposed SC 66 will result in an average 104% increase in bills for delivery service. Increases in monthly bills will range from 50% to 218% for customers who had been served on SC 67, and from 38% to 68% for customers who had been served on SC 68. These bill impacts are calculated in Exhibit LS-2.

Q. How does the proposed SC 66 compare to a rate that you would expect for customers that do not use gas during the Company’s peak?

A. I would expect that the amount that customers would pay on a rate designed for off-peak use would be less than they would pay on the standard general service for which they would qualify. I have not done a complete analysis of this topic, but it appears that many of the grain dryers may pay more on SC 66 than they would on the standard rates, and much more on SC 66 than they have on their previous rate, SC 67. It is not clear whether this is because of the combination of

SC 67 and SC68, or because the Company has misallocated customer costs, or some other reason. The fact that the customers can utilize the standard rates is not necessarily a solution, because then they are given no credit for the off-peak nature of their use. I believe the Company should address this concern in their rebuttal testimony.

Q. Why do you describe these increases as unreasonable?

A. These increases violate the principle of rate continuity. A large percentage of bills to SC 67 customers will increase by multiples of the system average increase and will double their current bills. Moreover, as I discuss later, these levels of increase are not justified by an appropriate consideration of the cost of service. The practical impact with regard to grain dryers, particularly because of the size of the customer charges that have been proposed, is that many of them are likely to switch to propane. In this case, the Company will lose the customers and their revenue altogether.

Q. How has the Company allocated demand-related transmission and distribution costs (primarily mains) to customer classes?

A. There is a difference between how the Company says it has allocated mains and what it has actually done. Ms. Althoff testifies that the Company used the Average and Excess allocation method, in which "...a portion of costs are allocated according to the average use of customer classes and a portion should be allocated based on the additional use related to the non-coincident demand of each class.." (Althoff, p.7)

In actuality, the Company has allocated costs to SC 67 and 68 in a different manner from all other rate classes. There are two relevant allocators, the DEMTRAN allocator for transmission plant, and the DEMDIST allocator for distribution plant. These allocators differ because DEMDIST does not allocate distribution plant to customers that are served from high pressure mains. First, for all classes, it weights the transmission allocator "excess" measure by 67% and the

“average” measure by 33%. For the distribution allocator the “excess” measure is weighted by 76%, and the average by 24%. The average weight is determined by the system load factor, and weights are consistent for all classes, as they should be. “Excess” is computed as the difference between the class coincident peak and what the Company has labeled its “average”. However, what the Company calls “average” is the annual use divided by 365 days for all classes other than SC 67 and 68. For SC 67 the “average” is its total use divided by 61 days, and for SC 68 the “average” is its total use divided by 150 days. The number of days represents the number of days in September and October for SC 67, and the number of days in May through October for SC 68. The grain drying class, SC 67, actually has sales in every month, although the largest sales occur in September through January.¹ Thus this so-called average is neither the average monthly use, nor the summer base use, but is more like the class non-coincident peak monthly use.

Q. How does the Company justify this unusual allocation methodology?

A. The Company seems to be arguing that it builds transmission and distribution plant to meet the noncoincident peak of grain dryers. It states that the peak grain drying season load (which includes the load of grain dryers plus all other customers during this season) “...does not exceed the peak winter load in the regional gas models, however there are portions of the system within the regional models where the grain drying season load exceeds the winter season load.” (Response to BEAR 2.04) The data provided does not demonstrate this. The table with this answer shows only that in the North Region the grain drying season load is 93 percent of the winter season projected peak hourly load, in the Central region it is 84% of the winter peak, and the South region has so little grain drying load that this season is not modeled.

Q. Has the Company provided any other data that demonstrates that there is a significant amount of transmission or distribution plant that was built to meet the fall peak of the grain dryers?

¹ January sales represent not January use but December use that is not billed until January.

124 A. No. The Company was asked to identify every portion of the system where an
125 individual customer's noncoincident peak caused the Company to install
126 transmission plant that would not have been necessary to service winter peak.
127 The Company responded with only two "examples" of such investment (BEAR
128 1.08). In both cases the customers had requested additional service from the
129 Company, and appropriately, both made financial contributions toward the cost of
130 the facility modifications. (Responses to BEAR 2.13, BEAR 2.05)

131

132 **Q. How would you recommend that transmission and distribution plant be**
133 **allocated?**

134 A. I agree that an allocator for distribution plant should reflect a measure of average
135 use as well as a measure of peak use. However, the measure of peak use should
136 be based on the customer's use at the time of the system peak. Transmission and
137 distribution plant are sized to meet the highest demand on them. For transmission
138 plant and for most distribution plant, this occurs at the time of the system peak.
139 The Company has built its system to serve its winter peak load. This system has
140 ample spare delivery capacity the rest of the year. The grain dryers and the
141 asphalt plants are using plant that would otherwise simply be underutilized. Their
142 load is very similar to interruptible load, in that they do not put demand on the
143 system during the time of highest use. While regulators and services must be
144 sized to meet individual customer loads, most mains are sized to meet the sum of
145 coincident peak loads.

146

147 As I noted above, the Company's "redefinition" of average use for customers on
148 SC 66 results in using a measure that is more like non-coincident peak than
149 average use.

150

151 **Q. If there are some locations where a portion of the mains have been sized to meet**
152 **the fall peak of the grain dryers, and mains plant is allocated on the basis of the**
153 **average and peak methodology, will this mean that grain dryers will not pay the**
154 **cost of serving them?**

155 A. It should not. If there are any mains that are sized to meet the fall peak of grain
156 dryers, this will be an usual situation, or the exception to the rule. Moreover, when
157 the Company has added local plant in order to serve a large grain dryer, it should
158 have computed that the customer's load will produce enough revenue to recover these
159 investment costs, and may have required a contractual commitment from the
160 customer before making large facilities investments. The Company's Rules,
161 Regulations, and Conditions to Gas Service specify that when unusual expenditures
162 are made in providing service, "Customer shall pay Utility a non-refundable
163 contribution for the estimated excess cost..." Thus if the Company had incurred
164 extraordinary costs associated with a customer's load, the customer would have paid
165 directly for such costs. (Response to BEAR 1.11)
166

167 **Q. What is the problem with having customers of very different sizes in the**
168 **same service class?**

169 A. The problem is that service plant, meters, and meter installations costs vary with
170 the size of the customer. This becomes an issue because the Company is
171 proposing to charge the full amount of what it computes as "facility" or customer
172 costs, primarily costs associated with service plant, meters, and meter
173 installations, through a customer charge. Since the customer charge is an average
174 for the class, the smaller customers will pay too much and the large customers
175 will pay too little.
176

177 **Q. Has the Company recognized this problem resulting from the range of**
178 **customer costs, by charging a lower customer charge for customers with use**
179 **below 1000 MDQ?**

180 A. No. The two customer charges reflect a very incomplete recognition of the
181 problem. Although the average customer cost for the below and above 1000
182 MDQ customers differs significantly, it is evident that there is still a wide range
183 of costs within the below 1000 and above 1000 groups.
184

185 **Q. Have you calculated the range of customer costs for SC 66 customers?**

186 A. I have computed the average per customer cost for the meter and meter
187 installation for customers using different size meters, based on the data used to
188 allocate meters and meter installations. The most data is available for meters and
189 meter installation costs, and these two plant items make up the majority of the
190 total customer costs. This cost ranges from less than \$2,000 to more than \$56,000.
191 Strangely, the range of costs for the SC66 customers who are identified as larger
192 than 1000 MDQ is considerably greater than the range of costs for the customers
193 who identified as smaller than 1000.² This may be a result of the inadequate data
194 that was utilized for the grouping of customers by MDQ. Exhibit LS-3 illustrates
195 this by computing the average cost of a meter and meter installation for different
196 sizes of meters.

197
198 **Q. What do you mean by “inadequate data” regarding customer MDQs?**

199 A. The only data that the Company had on this distinction was based on the MDQs
200 “established” by customers taking service under Rider OT. This represents only a
201 small portion of customers on SC 67 and SC 68. Only 26% of the therms used by
202 SC 67 and 68 customers were provided under Rider OT. For the remainder of the
203 customers, the Company estimated the MDQ. This is highly unreliable with
204 regard to grain dryers.

205
206 **Q. Why would an estimate of MDQ be highly unreliable for grain dryers?**

207 A. First, grain dryers daily use varies dramatically, depending on the availability of
208 grain, how wet it is, the temperature, and the market. Second, the MDQ of any
209 particular dryer could be substantially different from one year to the next.
210 Information that BEAR has regarding the grain dryers served by Illinois Power
211 indicates that its estimates of the numbers of customers with MDQs of more than
212 1000 are low.

213

² There appears to be an inconsistency between the Company’s rate analysis, which notes that all SC 68 customers have MDQs of over 1000, and the Company’s workpapers regarding meter costs, which show 4 SC 68 customers have MDQs of less than 1000.

214 **Q. What are the implications of this number being unreliable, and probably**
215 **low?**

216 A. The number of customers below and above 1000 is a billing determinant. For
217 every uncounted customer who turns out to have an MDQ of over 1000, the
218 Company will collect additional revenues, resulting in an overcollection of its
219 revenue requirement.

220

221 **Q. Has service plant been allocated appropriately to SC66?**

222 A. No, it has not. According to BEAR 1.38, BEAR 4.8 and 4.9, 18 customers who
223 will be on SC 66 also took service at the same premise under either a small or
224 medium commercial rate (duplicate rates). A second meter at the same premise
225 normally serves such facilities as small offices that are associated with the asphalt
226 or the grain drying operation. Data Response BEAR 1.38 further states that SC
227 67 customers who are also served under duplicate rates are not required to have a
228 separate service line, and also may not have separate regulators. In other words,
229 these customers have a single service which delivers gas to two separate meters,
230 which are billed under different rates. However, the Company has allocated
231 service plant to SC 66 as if each of the 82 customers has a unique service. This
232 means that 18 out of the 82 customers on SC 67 are paying once for a service
233 under their duplicate rate and then are allocated costs under SC 66 as if they have
234 a separate service associated with this rate class.

235

236 **Q. How do you recommend that this problem be resolved?**

237 A. I recommend that a provision be added to the rate that reduces the customer
238 charge by the fully allocated service cost currently embedded in the rate.
239 According to IP Exh. 7.12. p.2, the monthly charge associated with services is
240 \$14.15 for customers with an MDQ smaller than 1000 and \$24.82 for customers
241 larger than 1000. The weighted average of these two credits is \$20.73.

242

243 **Q. Are there other problems with regard to the treatment of service plant?**

244 A. Yes. As with meter plant the service plant cost attributed to SC 68 is higher than
245 that attributed to SC 67. These numbers are somewhat suspect however, as they
246 are based on a fairly small number of customers. According to WPE 3.331, the
247 Company is only utilizing data on 37 services for SC 67 and only 2 services for
248 SC 68. While this might be approximately 50% and 25% of the total services in
249 those classes, there appears to be a rather wide range of customers in SC 67. If
250 these 37 customers include relatively more customers with more expensive
251 services and relatively few customers with the less expensive services (which
252 presumably will be primarily smaller customers), the total service plant cost
253 allocated to SC 66 will be too high.

254
255 The other noteworthy issue with regard to service plant is again the range of plant
256 costs within SC 67. We cannot tell the full extent of the difference between the
257 cost of services, because the only data that is presented on service length is one
258 average number for the class. However, we can observe that 8% of the customers
259 used pipe that cost \$11.80/foot (WPE 6.331 and 6.334) while 8% used pipe that
260 cost \$32 to \$48/foot. Exhibit LS-4 shows the resulting variation in service pipe
261 by size and material of pipe. Variation in pipe size and expense will typically be
262 associated with variation in load, so we would expect that the customers using the
263 more expensive services are also using more expensive meters and meter
264 installations.

265

266 **Q. Have you computed the full range of customer costs?**

267 A. Due to the lack of full data on service costs, I have not calculated the service cost
268 per customer in the same form as I earlier calculated meter and meter installation
269 costs. However, as can be seen on IP Exhibit 7.12, p.4 the meter and meter
270 installation costs form by far the largest portion of total customer costs.

271

272 **Q. Is this problem regarding the range of customer costs found within a single**
273 **service class unique to SC 67?**

274 A. This problem is not unique to SC 66. Within a service class, there is always a
275 range of costs of customer-related plant, although this is not much of an issue for
276 residential and small general service classes, where customers tend to be more
277 homogeneous.

278
279 **Q. What is the impact of this range of costs within the SC 66 class?**

280 A. If facilities charges are set equal to the average allocated customer costs, some
281 customers will pay too little and some will pay too much. Setting the customer
282 cost for customers above 1000 at more than double the customer charge for
283 customers below 1000 is particularly a problem, because of the range of customer
284 costs within this group. The distinction between customers based on this 1000
285 MDQ cutoff is not borne out by the characteristics of these customers. It is not
286 clear whether this is because the identification of customers as above 1000 is
287 incorrect, or because some customers may have a meter sized for higher use, but
288 they do not actually use this much, or because of unique characteristics of
289 different customers, or because some customers simply have newer more
290 expensive meters. Whatever the reason, the practical result is that the grouping
291 does not reflect clear cost differences between these two groups.

292
293 **Q. How do you recommend addressing this problem?**

294 A. I recommend that the customer charge for all customers be set at no more than
295 \$400, with the remaining customer-related costs collected through a volumetric
296 charge. Any reductions in the requested revenue target should be used to reduce
297 the customer charge. I have calculated the volumetric charge that, combined
298 with these customer charges, will produce the same total revenue as the proposed
299 rate in Exhibit LS-5. I also recommend that the minimum customer charge should
300 be examined to ensure that the smaller customers on the rate are not paying an
301 average cost that results in overcharging them.

302
303 **Q. Why do you propose to reduce the customer charge to the level proposed by**
304 **the Company for customers in the under 1000 group?**

305 A. Actually I propose that the customer charge should be no higher than this amount.
306 I have made this proposal for two reasons. First is bill continuity. The
307 Company's proposal results in the customers in the larger group receiving the
308 highest increases, particularly in low consumption months. My recommended
309 rate change reduces the variability in the bill impacts. Second, as noted earlier
310 there is a very wide range of customer costs within SC66. Many customers,
311 particularly former SC 67 customers, will be overcharged by the proposed \$870
312 charge. Reducing this charge and collecting the remaining customer costs
313 through a volumetric charge will result in the larger customers, who tend to be the
314 customers with the more expensive customer facilities, paying more for customer
315 costs than smaller customers in the same group.
316

317 **Q. Are the characteristics of SC 67 and 68 similar enough to justify their**
318 **combination into a single rate class?**

319 A. This is not clear, since the Company did not allocate costs separately to SC 67 and
320 SC68. However, the customer-related costs of the SC 68 customers is higher than
321 that of the SC67, and thus increases the average cost for the new SC 66. While
322 there is a range of customer sizes within in each rate class, the SC 68 customers
323 are generally much larger than the SC 67 customers. The average size customer
324 on SC 67 is 66,911, while the average size customer on SC 68 is 209,917 (BEAR
325 Schedule 5.6). The load shape of these two service classes is not similar. The
326 only characteristic that they have in common is that they do not experience their
327 peak load during the Company's peak. I recommend that the Company
328 demonstrate that there is no significant difference between two customer groups
329 before combining them. It is particularly important, should they be combined,
330 that my recommendations regarding allocation of costs and design of the rate be
331 adopted.
332

333 **Q. Given the differences between the current SC 67 and SC 66, how should**
334 **customers be moved to this new rate?**

335 A. It is important that customers be given the choice of SC 66 and the normal service
336 rate that would also be available to them. Some customers may find, given the
337 high customer charge, that other rates are more economic for them.

338

339 **Q. Please describe the issue related to usage at temperatures below 32 degrees.**

340 A. Any use of customers on SC66 at temperatures below 32 degrees is used to
341 establish the customer's Rider B demand charge, applicable to gas use, and the
342 SC 66 demand charge.

343

344 **Q. What is the reason for setting this point at 32 degree?**

345 A. This rate is apparently designed to minimize use by these customers "...when
346 significant space-heat load is present." SEE BEAR 1.47, 2.01 BEAR 3.16. Mr.
347 Jones also testifies that historical average temperatures drop below this level from
348 mid-December to mid-February. (p. 16),

349

350 **Q. Has the Company presented any evidence that justifies charging customers
351 more for use when temperatures are below 32 degrees?**

352 A. No. When asked whether temperatures below 32 degrees affected system
353 planning criteria, the Company noted that all space heat customers were assumed
354 to be heating when temperature was below 32 degrees, but provided no
355 explanation as to how this temperature had a unique impact on system planning.

356

357 **Q. Can you describe criteria that might justify a demand charge for customers
358 on SC 66?**

359 A. Yes. The Company has planned its system under the assumption that asphalt
360 plants and grain dryers will not be using gas at the time of its system peak.
361 (BEAR 1.27, 1.28) It would be reasonable to impose a demand charge that
362 applied to use during days that were close to or equal to system peak days.
363 However, such days would be much colder than 32 degrees.

364

Q. Is there any cost basis for the demand charge that will apply when customers use gas at temperatures less than 32 degrees?

A. No. Neither the allocated cost of service study nor any other analysis indicates why this charge was chosen. According to the response to BEAR 1.25, the Excess MDQ charge will be three times the proposed SC 65 demand charges, but no rationale for this multiplier has been provided.

Q. What does the evidence indicate about usage when temperatures average 32 degrees?

A. Recent experience demonstrates that the Company's load at temperatures of 32 degrees do not come close to either actual peak load, or more relevant, to the peak load that the system is designed for. In response to discovery the Company has provided actual load on days when the average temperature was 32 degrees. In the table below, this load is compared to the 2003 actual peak load and to the 2003 design peak load. The data is found in BEAR 1.35, BEAR 1.33, and BEAR 2.10.

MMBTU/day Average load/ peak load

Average 32 degree day	374,865	n.a.
Actual 2003 peak day	669,379	56%
Design peak day	891,580	42%

Q. What is your conclusion regarding this 32 degree trigger point?

A. There may actually be no need for any such penalty, since the basic characteristics of customers on SC 66 make it extremely unlikely that they would consider using gas at temperatures near the Company's peak. Grain dryers trying to dry grain on cold days are forced to use more gas than they use on more moderate days and the price of that gas tends to be higher. Thus, they have an economic incentive not to dry gas on very cold days. Nevertheless, if the Company believes that there is a

393 need to provide an incentive to keep SC 66 customers from using gas during the
394 winter peak, an appropriate trigger point would be a temperature that produced
395 loads much closer to the Company's design peak than 32 degrees. I have no
396 particular temperature recommendation to make at this time. Rather, the
397 Company should propose a trigger point and justify it. Given the fact that its load
398 on 32 degree days was only 56% of its peak load during 2003 and only 42% of its
399 design peak load, the Company has not come close to justifying a trigger of 32
400 degrees. Put another way, there would be absolutely no cost to other ratepayers –
401 either in the short term or long term - if SC 66 customers used gas on a 32 degree
402 day or even on a day considerably colder. Additionally, the Company will
403 receive additional revenues even though no additional cost is associated with SC
404 66 use on 32 degree days. The only way that SC 66 customers could impose costs
405 on the system is if they used gas on a day approaching the design peak load.
406 Thus, the Company should bear a heavy burden of proof if it requests a trigger at
407 anything higher than a temperature that could result in design peak load.

408
409 **Q. Does this conclude your testimony?**

410 **A.** Yes, it does.